

Large Spark Ignition (LSI) Engine Working Group Meeting

On April 21, 2004, Air Resources Board (ARB) staff conducted the fifth LSI working group conference call. A discussion of each agenda item follows:

| Agenda Item | Discussion |
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| Regulatory Objectives | <ul style="list-style-type: none">• Maximizes cost-effective emissions benefits, meets SIP obligations, and increases opportunities for zero-emission technology• Maximize fleet owner flexibility, while ensuring that the regulations are enforceable• Ensure the regulation doesn't provide adverse incentive for fleets to<ol style="list-style-type: none">1. hold on to older higher-polluting LSI forklifts or2. purchase higher-polluting diesel forklifts instead of electric or LPG or3. import out of state equipment |
| Regulatory Options | <ul style="list-style-type: none">• Staff discussed the options in Table 1. See Attachment• Will rule be a stand alone or combined?• ARB looking at tiered standards more stringent than 2007 EPA requirements• What happened to alignment with federal EPA 2007 standard?• What are the emission benefits of each scenario?• ARB will release regulatory alternatives 10 days before the May workshop, and estimates of emission benefits at workshop• Plan to have regulation encompass more than forklifts |
| Electric | <ul style="list-style-type: none">• ARB motivated to go electric = zero emission• If regulation went all electric, operators might keep old equipment longer and not get the tons we want• WG interested to know if electric charging may be a grid load issue• WG interested to know the electric upstream emissions• What are impacts of other emissions from electric lifts (ozone, H₂S, etc.)? |
| Retrofits | <ul style="list-style-type: none">• All options will have a retrofit component as uncontrolled LSI often will have emissions in excess of 12g/bhp-hr• Emission Control Group – broader way to look at retrofit kit application: could include different engine families, different equipment, different manufacturers – in one verification |
| User Fleet Average | <ul style="list-style-type: none">• Enforcement will be difficult; could require self-certification• Fleet average would take operating hours into account• Working group stresses need for fleet average |

[Attachment](#)